

REMARKS

Claims 1, 7, and 9 have been amended solely to cure typographical errors. Claim 10 has been canceled. Therefore, claims 1-9 and 11-12 are currently pending in this application.

Objections Based on Informalities

The Office has objected to the abstract for exceeding 150 words, being longer than a single paragraph, and containing a typographical error. Applicants thank the Office for its attention to detail. Applicants have amended the abstract to cure the various informalities and respectfully request that the Office withdraw its objection.

The Office has also objected to claims 1, 7, and 9 for typographical errors. Applicants again thank the Office for its attention to detail. Applicants have amended claims 1, 7, and 9 solely to cure the various informalities and respectfully requests that the Office withdraw its objections.

The Office has objected to claim 10 for being of improper dependent form. Applicants have canceled claim 10.

35 U.S.C. § 102 Rejections

Claims 1-10 were rejected under 102(e) by Shirota et al. (US PGPub 2003/0067857) (hereinafter, "Shirota et al.").

Applicants respectfully traverse this ground for rejection. Without taking a position as to whether Shirota et al. anticipates the claimed subject matter, it is Applicants' position that Shirota et al. is not prior art to the present application. Applicants are enclosing herewith an executed Declaration by the lead inventor, Takashi Horai, and by the patent attorney in Japan whose patent law firm prepared the case, Mr. Koichi Oishi.

The main prior art reference relied upon by the Examiner, Shirota et al., was published on April 10, 2003 for an application filed in the United States on September 10, 2002. The other reference cited by the Examiner, Usami et al., was published on September 11, 2003 for an application filed in the United States on March 6, 2003.

Applicants note that the present application claims priority from a Japanese application filed in Japan on October 30, 2002, bearing Application No. 2002-316216. Accordingly, the priority application was filed in Japan approximately six weeks after the filing date of Shirota et al. and was filed approximately four months before the filing date of the Usami et al. reference.

Applicants submit herewith evidence that the invention was reduced to practice prior to the earliest filing date of either of the two references. Namely, applicants have evidence of reduction to practice having occurred and been completed on or before July 12, 2002.

Attached herewith are two Declarations, a first Declaration from the patent firm in Japan which prepared the case, by the partner, Mr. Oishi, and one from the first named inventor, Mr. Horai.

The patents attorneys of Mr. Oishi's office met with TDK on July 12, 2002. During that meeting the inventors presented test results of having carried out the invention and actual evidence of a reduction to practice of the invention.

In particular, as stated in Mr. Oishi's Declaration, it is his firm which prepared the Japanese patent application which was subsequently filed in Japan as the priority document from which this present application stems. As evidence of their having met on July 12, 2002 with the TDK personnel and inventors, he has provided the attached Declaration which states the facts of the meeting and the documents which were received in the meeting. As additional evidence to support the date, he attaches as Exhibit A to his Declaration a printout from his computer database indicating that the personal meeting took place on July 12, 2002. Since the database is in Japanese, the translation of the relevant database entries are provided in Mr. Oishi's Declaration.

In summary, as Mr. Oishi's Declaration points out, the database screen includes an indication that the applicant of the newly received invention disclosure was TDK Corporation. Box #2 indicates that the person in charge of the technical matter was Mr. Oishi, the patent attorney who has signed the enclosed Declaration. Box #3 contains the patent application number in Japan. As can be seen, this patent application number corresponds to the patent application which is the priority document of the present application. Box #4 on the printout shows a receive date of the technical disclosure and the receive date provided as July 12, 2002.

In addition, Mr. Oishi also provides the actual technical document which was given to his patent law firm on the date of the meeting of July 12, 2002. Namely, as Mr. Oishi states in his Declaration in paragraph 9, a patent liaison from TDK came personally to his offices on July 12, 2002 and provided to them the Exhibit B which is attached to his declaration. He thus has provided evidence that they had possession in their office of the Exhibit B which shows reduction to practice of the invention having occurred prior to the meeting on July 12, 2002.

Mr. Oishi also states in his Declaration that during the personal meeting that occurred in their office, an explanation of the operational features of the invention was provided and that the patent attorneys began to prepare a patent application. Accordingly, it is clear that the inventors had provided to the patent law firm in Japan the Exhibit B with its evidence of an actual reduction to practice of the invention on July 12, 2002 and that an actual reduction to practice the invention had occurred sometime prior to that since the document of Exhibit B was prepared for presentation at the meeting.

The Declaration of Mr. Horai, the lead inventor, is also attached which provides additional evidence and personal testimony of an actual reduction to practice prior to the July 12, 2002 filing date of Shirota et al. In particular, Mr. Horai's Declaration expressly states that the inventors had conceived of and reduced the invention to practice prior to September 10, 2002. As evidence that the invention had been reduced to practice prior to September 10, 2002, Mr. Horai attaches Exhibit A which is a copy of two pages evidencing a reduction to practice of the invention.

These pages of Exhibit A are in Japanese. Accordingly, applicants' attorney has had a Japanese interpreter provide a translation of the relevant portions for the Examiner. Attached to the response to this Office Action under the heading "Translation of Marked Text Portions" is provided a translation of those portions for ease of reference in the response. Exhibit A of the Horai Declaration looking now at the graph at the top shows the basic pattern of a write pulse for a DVD at 4x speed. Since this is in English, no translation need be provided. The next heading, in Japanese, within Box #1 states that this paper depicts a strategy proposed for 4x DVD-R recordings.

On this paper, the inventors set forth the current state of the art and then provide examples of the practice of the invention having been carried out.

Specifically, Exhibit A to the Horai Declaration has two pages: a first page in which one example is shown and a second page in which further practicing of the invention was conducted showing three total examples, the original first example and then two new examples of practicing the invention.

As Mr. Horai points out in his Declaration, the present invention provides greater margins for jitter that can be obtained using a longer T_{top} and a larger Ph/Pm ratio, which is obtained by using a smaller Pm value. *See, for example*, the text translation in Box #2 of Exhibit A, pages 1 and 2. (In the Japanese language text, the letters Ph was used for the top recording power, whereas the letters Pw were used in the present claims.)

As pointed out in Mr. Horai's Declaration, and as is clear from the text of the contemporary document, the conditions for recording were set to be within the limit of the current claims of the application. Namely, the conditions were set so that the top recording power was greater than $1.7T$ and the ratio of Pw to Pm was greater than 1.4. This is currently reflected in all independent claims, namely, claims 1 and 7.

The rest of the Declaration of Mr. Horai is clear that they actually conducted the test and achieved a reduction to practice and provided three examples on page 2 of Exhibit A of his Declaration.

The correlation between Exhibit A showing the reduction to practice of the invention and the present application can be seen in that the actual working examples as used in the patent application as filed in the U.S. on pages 23 and 24 are the actual working examples from this document of Examples #1, #2 and #3 in the table of Examples. Namely, the working examples which the applicants provided in their application as filed in the U.S. are taken from and correspond to the examples of Exhibit A, page 2, which was created by the inventors evidencing a reduction to practice of the invention prior to the filing date of Shirota et al.

In conclusion, the Declarations of Mr. Oishi and Mr. Horai, together with the attached contemporaneous documents clearly show a reduction to practice of the invention prior to the filing date of the prior art of September 10, 2002. Accordingly, the prior art is removed as a reference.

35 U.S.C. § 103 Rejections

Claims 11 and 12 stand rejected under 103(a) as being unpatentable over Shirota et al. in view of Usami et al. (US PGPub 2003/0169679) (hereinafter “Usami et al.”).

Applicants respectfully traverse this ground for rejection, as well.

Usami et al. has a U.S. filing date of March 6, 2003. In comparison, the present application claims priority from Japanese application JP 2002-316216, filed on October 30, 2002, over 4 months prior.

If the Office requests, applicants will obtain a certified translation of the priority documents submitted, but since the prior art is pre-dated by a Declaration under Rule 1.131, this is not believed necessary.

Conclusion

Applicants respectfully submit that all pending claims are in condition for allowance. Accordingly, Applicants request that a Notice of Allowance be issued. If the Office’s next anticipated action is to be anything other than a Notice of Allowance, Applicants request that the undersigned be contacted for scheduling a telephone interview.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,
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**TRANSLATION OF MARKED TEXT PORTIONS OF
EXHIBIT A FROM HORAI DECLARATION**

Note: The phrases provided between square brackets “[]” are supplied by the interpreter, while the phrases between the parentheses “()” are found in the original Japanese texts.

TEXT #1

“Depicted above is a strategy proposed for 4X DVD-R recordings.”

TEXT #2

“Two types of strategies, shown left, have been adopted as Basic Write Strategy. Since the optimum power ratio depends on the media, an optimum power in actual devices would likely be controlled under such ratio.

However, the research within TDK has revealed that grater margins for jitter is obtained in these two types by using longer Ttop and larger Ph/Pm ratio (*i.e.*, smaller Pm) for 5T or above.”

TEXT #3

“The possible mechanism is as follows:

In recordings for marks of 5T or above, Pm (middle power) is adopted. Therefore, the mark length can be adjusted by Ph/Pm ratio, Ttop (top pulse) and Tlp (last pulse). For example, TDK’s media gives a bottom [jitter] characteristic at around $Ph/Pm = 1.38$ and 18mW. In reality, the media shows a better performance for a higher power if $[Ph]/Pm$ ratio is increased, instead of $Ph/Pm = 1.38$.

However, the [conventional] drive has a fixed Ph/Pm ratio.

Contrary [to the conventional drive], the [present] example shows smaller dependency on Pm because the mark length is formed with extended Ttop. As a result, reduction of deterioration in the jitter is achieved.

‘Advantages’

Wide margins are favorable in light of fluctuations in power of drives and in sensitivity of media, thus, the strategy in the example is advantageous.

‘Means’

For marks of 5T or above, Ttop is set longer and Pm is set smaller than those for Basic Write Strategy. Preferably, nTtop is set between more than or equal to 1.70 T and less than or equal to 2.00 T. (We have obtained only one example at this stage. Now we are planning to research in the near future.)“

TEXT #4

“Improvement Regarding Write Strategy --- 4X DVD-R Recording Media”

TEXT #5

“ ‘Example 2’

The recording has been conducted with the nTtop of 1.9 T and the Ph/Pm of 1.45. (The result has never before been obtained.)”